

Abstract of the Disclosure

A catalyst comprising a complex of catalytic oxides comprising potassium, cesium, cerium, chromium, cobalt, nickel, iron, bismuth, molybdenum, wherein the relative ratios of these elements is represented by the following general formula



5 wherein A is Rb, Na, Li, Tl, or mixtures thereof,

X is P, Sb, Te, B, Ge, W, Ca, Mg, a rare earth element, or mixtures thereof,

a is about 0 to about 1,

b is about 0.01 to about 1,

10 c is about 0.01 to about 1,

d is about 0.01 to about 3,

e is about 0.01 to about 2,

f is about 0.01 to about 10,

g is about 0.1 to about 10,

15 h is about 0 to about 4,

i is about 0.1 to about 4,

j is about 0.05 to about 4,

x is a number determined by the valence requirements of the other elements present,

20 and wherein the catalyst is substantially free of manganese and zinc. The catalyst is useful in processes for the ammoxidation of an olefin selected from the group consisting of propylene, isobutylene or mixtures thereof, to acrylonitrile, methacrylonitrile and mixtures thereof, respectively.